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DECEMBER, 1919

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MINNESOTA MEDICINE

Journal of the Minnesota State Medical Association

VOL. II DECEMBER, 1919 No. 12

ORIGINAL ARTICLES

RECONSTRUCTION IN MEDICAL EDUCATION.*

George Douglas Head, B.S., M.D.,

President's Address, Minnesota State Medical Society.

War costs a nation not only the blood of its stalwart young men and the treasure of the state, but also brings in its trail a disorganization of all the organic elements of society. History discloses the fact that institutions of higher learning have not escaped its destructive force. While a period of war preceded that mighty intellectual revolution which culminated in the organization of the first great university at Paris and its contemporary at Bologne in the twelfth century, the French Revolution tore down much of the educational structure, which had through the intervening centuries been erected, and many of the old European universities perished or went into decay.

The history of education in this country bears witness to the destructive effect of the Civil War upon our colleges. A lack of student body, faculty, and funds compelled the closing of doors of most of these institutions. A few of the oldest and best endowed, such as Yale, Harvard, and Princeton were able to maintain their courses of instruction.

The devastating effect of the World War, just closed, among European institutions of higher learning is too well known to require consideration at this time. Profiting by the sad experiences of our Allies and the Central Powers, the United States, soon after war was declared, attempted to keep the young men in the colleges by providing military training through the Students Army Training Corps. Likewise in the medical schools, the inducements offered to the students to remain at their work under government supervision, in order that the country and the army might not be entirely cut off from a supply of physicians, should the war be continued over a number of years, operated in a most beneficial way to retain a part of the student body in the class rooms, laboratories, and hospital wards.

These measures, together with the short duration of the war, prevented the complete demoralization of our system of higher education. Our universities, colleges, and professional schools have suffered, but no disorganization has occurred, and these institutions are now slowly recovering from the blow dealt them by this great calamity in human history. The time is, therefore, most opportune for the examination of the present status of medical education and for reconstruction without confusion, provided changes are demanded by the experiences of the war, and an analysis of conditions discloses faults which should be remedied.

I wish to join forces with those men who believe that serious defects exist in our methods of medical instruction. My twenty years experience as a medical teacher, my close association with the graduates in medicine of recent and former years, and my observations in military service have led me to this conclusion.

The work of medical schools must be judged by the type of medical man produced. The graduates serve as a mirror in which are reflected the good and bad elements. A study of the subject cannot be approached with profit from any other angle. Medical schools differ in the character and type of man graduated. Some institutions pay more attention to the preparation of men as medical teachers and investigators. This is the aim of the best endowed schools. On the other hand, medical schools supported and controlled by state gov-

*Presented before the Minnesota State Medical Association Meeting at Minneapolis, Oct. 1919.

ernments endeavor to produce primarily a practitioner of medicine, who shall serve intelligently the people of the state as medical advisor and as public health councillor.

So varying are the fortunes of life and so kaleidoscopic are the changes wrought in the affairs of men, that, in the final analysis, it makes but little difference whether a young man is being prepared for the career of a medical teacher, investigator, general practitioner, or, if you please, a specialist. Certain qualities of mind and heart are essential. He should possess (1) adequate knowledge, (2) an analytical mind capable of weighing evidence and drawing sound conclusions, (3) a love of truth continually urging him to make investigations and record observations, (4) a realization of the limitations of his knowledge, which prompts him to seek by diligent study and post graduate instruction to perfect it, (5) an acquaintance with the art of the practice of medicine secured by close association with men of experience and personal qualifications, (6) a calm and equitable temperament and a large fund of human sympathy, (7) a lofty conception of the ideals of his professional work, which lifts it above the standards of business and civil life.

Are the medical schools of today developing this type of man? If not, why not? If not, what constructive efforts should be made to improve medical instruction? In a spirit of genuine interest and a full knowledge of the difficulties, with a large sympathy for those who are directly associated with the work, I propose to discuss some of the phases of this subject.

The medical student should possess adequate knowledge. In this particular the work of the schools, with some exceptions, is now well done. The graduate of today is a better prepared man and leaves his alma mater with more knowledge than any generation of medical men which has preceded him. A great step forward has therefore been made. He is, however, told too much and permitted to observe and learn for himself too little. The stuffing methods of modern laboratory instruction are, I think largely responsible for it. The elaborate mimeographic copies placed beside the student's microscope, describing in every detail the section of tissue to be examined, or the chemical reaction to be observed are wonderfully efficient, but there is lacking the strong element of the pioneer days, when the student was given a specimen of tissue to study with the emphatic direction, "Here is the section. Tell me what you see," or, "Here is the specimen. Analyze it and tell me what it contains." Elements of strength characterize every pioneer movement, whether men are engaged in a fight for existence upon the western plains, or creating under difficulties an institution for the teaching of medicine. Wherein does the force of such a movement lie? It can be stated in four sentences. First, freedom to act without precedent and on a man's own judgment and initiative. Second, economy of effort which flings aside unnecessary details, tears off the mask of non essentials, and strikes directly at the thing to be done. Third, self-reliance developed by meeting difficulties and unforseen obstacles and overcoming them. Fourth, human sympathy born of mingling with one's fellows and learning the value of "the humanities."

The chief end of medical instruction is not the training of a young man's brain as a store house of facts. He must be taught how to use his brain; to acquire knowledge by the use of his own faculties. What if there are great gaps in his medical knowledge at graduation. These will soon be closed if he has learned the method by which things are learned, if he leaves college with a keen sense of his deficiencies. Our schools of medicine in their struggle for efficiency have been weaned away from the strong factors in the pioneer methods. The student possesses knowledge but he lacks virility and power of growth. The courses cover too wide a field. Much information valuable to know is dragged in but it is nonessential and a refinement. There is some danger in teaching too much. A multiplicity of methods often leads to confusion. The best, most well tried procedures and laboratory tests should be learned. Much good judgment can be shown in this respect when courses are outlined. Accumulated experience to be worth anything in this short life with limited material must be confined to the methods which time has proven of value. It is drill which the student needs in **the best** method of doing a thing.

Simplify the instruction and utilize the pioneer methods—should be the watchword of the hour in this feature of medical reconstruction.

The medical man should possess an analytical mind and keen powers of observation. Any system of medical education which does not develop these qualities is a failure. I have said that the graduate of today leaves his alma mater with more knowledge than any generation of men which has preceded him. This is true but I wish to add that our system of modern medical education is now creating a type of men with less initiative, weaker powers of analytical reasoning and observation, and the ability to differentiate clearly between fact and theory than any generation of medical graduates which has preceded him in the last quarter of a century. The student in order to possess powers of reasoning must wade through processes of reasoning himself. He cannot simply follow along the paths laid down for him. To develop keen observation, he must be taught to look for himself, to work out his own diagnosis at the bedside, under the helpful guidance of the teacher.

Young men to develop these mental attributes must be constantly in close contact with men possessing to a high degree these very mental qualifications. There is no other way for them to learn. Teachers in medicine are today too far away from their students. Here the difficulty lies. There is too much of the cloistered life of the research laboratory and the administrator's desk to meet the demands of effective medical teaching. It is in the arena of the hospital ward and at the laboratory desk, elbow to elbow with the student, that the real instruction is given, and the real inspiration received. Just as in the pioneer days too much of the instruction was didactic and demonstration was lacking, so in the methods of today a serious danger arises in the delegation of teaching to subordinates. The strong men in our medical faculties are too busy with writing books, too busy with research problems, too busy with administration, too busy with public health propaganda, University extension courses and the like, too busy with everything except the real work in hand, namely developing in the minds and hearts of their students those very elements which only close personal association with great and strong minds can give. The life of the teacher of modern medicine has indeed become a complex one. He must simplify it. Reconstruction in medical education calls for a readjustment of the relation of professor and student.

The medical graduate must possess a love of truth so ingrained in his nature as to make him a natural observer and investigator. We all possess great sympathy in every effort, no matter how feeble, to add to the sum of medical knowledge. No one, much less the writer, would discourage it. We must all admit that, as we look over the last decade, a great deal of energy has been wasted and misdirected in so-called original investigation. It has served to hamper in many medical schools what would otherwise have been very creditable medical teaching. Every student, properly prepared for his life work, should have had interwoven in his course of instruction some simple elementary research problem, giving him an insight into and some knowledge of the methods pursued. The subject of such investigation should arise naturally out of his own mind, as a corollary of work in which he is interested. It should never be thrust upon him as a matter of duty or necessity. The true spirit of research arises out of a love of truth, a burning desire to add knowledge. It is born out of enthusiasm for truth, an inner flame which cannot be put out until the thing is attempted. The lightly undertaken "made to order" brand of research now extant does not meet the requirements which should be required of men working in centers of scientific learning. Much of it is ill-advised, too hastily carried on, published without proper confirmation, and with the evident intent of securing quick scientific reputations or to meet university research demands. In the interest of student, teacher, and the profession at large a serious attempt should now be made to readjust this phase of the work and establish it in the hands of those more competent to direct it along proper lines and under proper safeguards.

The medical graduate should possess a keen realization of the limitations of his knowledge. There is danger for a young man in knowing too much and knowing that he knows it. The medical graduate of today is too well satisfied

with his knowledge. This is one of the serious defects in our present system. He is so well satisfied that he fails to grow, fails to study and further perfect himself. He does not leave college with a feeling that only a beginning has been made; that long years of continued study, enriched by wide experience, are necessary in order to develop himself into a well rounded physician; that to the wisest man in medicine, experience is fallacious and judgment difficult. He much overestimates the value of modern instruments of precision; lacks a conservatism born of contact with men of wide experience; is not teachable. This is a real fault. I am quite sure I am not mistaking the cock-sureness, confidence and intolerance of youth for this self-satisfied attitude. If I am right about it, wherein does the difficulty lie and how can it be remedied? It arises out of the development of medical teaching as a profession. Most men cloistered in the lecture room, study, or laboratory, apart from the broadening influence of the outside world, surrounded by their coterie of students, over whom they wield such absolute authority, tend to become narrow, self-centered, intolerant, dogmatic. It takes a very big man not to be so spoiled by from ten to twenty years in a professorial chair. This attitude of mind becomes infectious. The student absorbs it. His normal, healthy growth is warped and retarded by this mental attitude. The student should leave the university halls with the feeling that he knows very little; that he has only made a beginning; that many competent men in the profession are not teachers of medicine; that real investigation of the highest type and best sort is being done outside of teaching institutions; that there is something to be learned every day from the time he receives his sheepskin until, with dimmed vision and trembling fingers, he examines his last patient.

I well remember a vivid picture which I carry to this day of that grand old man in medicine, Jonathan Hutchinson, whom I saw in London fully fifteen years ago, demonstrating to his class a case of chronic chickenpox, the second of the kind he had ever seen; how he came into his clinic bent with age, with feeble voice, shuffling gait, and trembling hand, nearly eighty years of age, but radiant with scientific interest. After he had given a most interesting clinical lecture upon the features of the case, he turned and introduced his old artist, a man nearly his own age, who immediately sat down at his easel and with his palette and brush began making an oil painting of this rare case. "Ah," I thought to myself, "what a great spirit—still learning, still observing, still producing."

There are good arguments in favor of the all time clinical teacher. He is a scientifically trained man, possesses the research spirit, has usually had teaching experience, has acquired some executive training, and can devote all his time and energy to the work, but he is frequently handicapped in that he usually lacks clinical experience, undervalues the art of professional practice, is likely to be one-sided in his development, is out of touch with the profession and often lacks the human qualities more fully developed in men trained outside the laboratories.

Cowper has most beautifully said, "Knowledge and wisdom far from being one have oft-times no connection. Knowledge dwells in heads replete with thoughts of other men, wisdom in minds attentive to their own. Knowledge is proud that it has learned so much, wisdom is humble that it knows no more."

Young men should leave our medical schools with open minds receptive for every scrap of knowledge which can be obtained from whatever source. There is room for reconstructive efforts in their "bringing up."

The medical graduate should possess a thorough knowledge of the art which we practice and appreciate fully the value of "the humanities." A teacher of medicine, with whom I recently discussed this phase of medical education, made this statement, "At present we are standing up so straight on the laboratory and technical side of medicine that we are falling over backwards." Whatever may have been the defects, and there were many in the medical instruction of twenty years ago, the humanitarian side was given full emphasis. Men and women are not test tubes and retorts. The poorest and most miserable have feeling and emotions, fears and forebodings. Hope cheers them in the hour of dispair. A kind, sympathetic word helps to brave the tortures

of body and mind. Like a musician who skillfully plays upon the strings of his harp, so the physician, whether he realizes it or not, by words and bearings, plays upon the delicate nerve strings of his patient. Cabot has said, "Physicians are born not made." If this is so it is because sufficient pains and effort have not been expended in throwing the medical student in his final years in personal contact with medical men who have learned the art of the practice, practitioners, who have developed through long years of training, the finer qualities of heart, the power of human sympathy, the intuitive sense which detects a delicate situation in the sick room, and by a calming word of reassurance, quiets the patient's fears. One of the greatest living teachers of medicine placed "Hope" as the chief remedy in the armementarium of the physician.

General Munson has recently suggested a series of psychological tests to determine the mental fitness of candidates for entrance into medical schools. I would go a step further and propose that young men about to receive their degrees be examined as to their human qualifications. Do they possess the power of human sympathy? Can they develop a personal interest in the men and women whom they treat? Do they have patience, optimism, and equanimity of spirit?

In the struggle to secure efficiency, the humanitarian side of medical teaching, is being submerged. Medicine is not yet a science. The graduate should leave college with knowledge sufficient to diagnose the disease, and those attributes of soul as well as mind necessary to treat the patient. The old preceptor method of medical training possessed many strong features which must not be lost sight of in the reconstructive efforts to teach medicine.

Not all enter the practice of medicine with the same end in view. To one it may be only a means to a livelihood, to another a path to fame or fortune, to a third a life work by which to best serve his fellowmen. Undoubtedly, most of us have been influenced by more than one motive. The atmosphere in which a young man works out his earlier years determines his professional ideals. The influence exerted by his medical teachers, the view point held up before him by the practitioners with whom he early comes in contact, the example of one or more strong spirits in th profession, who exercise a dominating influence upon his professional development, are the most potent factors.

I cannot help but feel that both in college and outside we are today offering to the young men a poor example. Outside of college there is too much talk about professional incomes. A man's professional success and attainment are too often measured in terms of his earning capacity. This creates in the mind of the young practitioner a commercial ideal. He counts success in terms of dollars and cents. Within the schools, the atmosphere in the wards, the out-patient service, and the laboratories is that of "the day's work," the cold, scientific study of the disease in the man.

Medical teaching is developing more and more into a professional business. Sentiment is lacking, and the student leaves his alma mater deficient in human qualities so essential for the management of the sick. The attempts to secure added reputation as investigators, by public press notices and other business methods, is unworthy of our traditions. Newspaper headlines sometimes published with the portrait of the teacher or investigator, announcing scientific (?) discoveries before the actual contribution has been read, much less confirmed by fellow workers, does not meet the standards of conservative procedure which we would wish to set before our young men. Our views of the ethics required of a noble calling must not give way to the demand of the times to practice these business methods. In this reconstructive period of medical education, consideration should be given to the preservation of the ideals so dear to the heart of every physician, who loves truth, detests sham, and desires to reward real merit.

I have thus far discussed the reconstructive efforts centering in the interests of the undergraduate. No consideration of this subject would be complete without some reference to efforts directed toward our system of postgraduate work.

The war just closed has made great demands upon the knowledge and skill of our profession. Not only have medical men been called upon to care for the common medical and surgical diseases and injuries incident to war, but

specialized skill has been given in orthopedic surgery, brain surgery, traumatic surgery of all kinds, in neurology, psychiatry, sanitation, genito-urinary diseases, medical consultant work, etc. It can truly be said that this war to the medical man who has served has been a postgraduate school of medicine and surgery, including the specialties. A well known pediatrician of this country expressed himself in these words, "The United States owes me nothing. My experience in the army has fully repaid me for all I have sacrificed." The old world Central Powers to whom we were wont to flock for postgraduate work are broken in spirit, disorganized, out of sympathy with our ideals, despised and rejected nations, whom we cannot in our present mood support or fraternize with.

These two potent factors, the taste for a wider scope of knowledge, created by war experiences, and the severance of our relations with the Powers of Central Europe, call for a determined movement upon the part of the profession in this country to create upon our shores great institutions of postgraduate instruction, which shall meet not only our own requirements, but shall attract students from all parts of the world. The University of Minnesota, assisted by the profession of this state, will, I am sure, move forward in the larger development of this work in conjunction with the mighty efforts being put forward in other parts of the country. Postgraduate instruction should be developed along broad lines with separate curricula, special corps of teachers, utilizing all available material. Courses in preventive medicine, sanitary science, training of health officers, and the like should be given the most careful consideration. The instruction should be thorough, attractive, practical. The knowledge which medical men need in their work should be given. Theory, ultra-scientific procedures and methods should be case aside. The real meat of medical knowledge should be taught. These are the courses busy practitioners want. We are living in a time of real things. We are seeing eye to eye with a clearer vision than before.

This I fear may seem to you a severe arraignment of modern tendencies in medical education. It is a personal view, frankly and honestly expressed. In the words of Abraham Lincoln, "Upon the subjects I have treated I have spoken as I thought. I may be wrong in any or all of them, but, holding it a sound maxim that it is better only sometimes to be right than at all times to be wrong, so soon as I discover my opinions to be erroneous I shall be ready to renounce them." The subject has been presented in the spirit of helpfulness, not of criticism. The defects are not fixed. They indicate a trend in medical education rather than a settled purpose. They do not exist in all medical schools, nor do all individuals in any one school exemplify them. Proper reconstructive measures instituted and carried out under wise leadership can correct them.

In the great war, which, thank God, has now closed, the physicians of this state have made a noble sacrifice in the interests of humanity and our beloved country. More than three hundred and fifty members of this Association have volunteered under the flag. Almost every medical man in the state has served on local draft boards, aviation examining boards, pension boards, reconstructive aid boards, and the like, with little or no compensation. True to the traditions of our profession, we have given freely and have experienced the joy of self sacrifice for a higher good, the giving, as Lowell has so divinely expressed it to "That which is out of sight, that thread of the all sustaining beauty which runs through all and doth all unite." In the metamorphosis of the civilized state, there is much work for courageous and honest men to do. Reconstructive efforts in medical education are matters of large concern to the profession of this state.

As our profession has sacrificed in the interests of our country, so now let us rededicate ourselves to the noble ideals laid down by the fathers in medicine. The Hippocratic oath emphasizes to the fullest degree the responsibility imposed upon and the sacrifice expected of every disciple of Aescalapius in the teaching of his art. This applies to teacher and practitioner alike. As we practitioners set the example, so will the coming generation of young physicians practice the art. As the teachers of medicine propound and exemplify the ideals of our calling, so will the graduates of tomorrow reflect the force of their example.

INTRACAPSULAR EXTRACTION OF CATARACTS*

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Practically all ophthalmologists admit the advantages of the intracapsular extraction of senile cataract; the operation is being practiced as the best method of extraction of cataractous lenses of certain types. The comparative freedom from iritis and the long periods of reaction during the absorption of retained cortical material is enough in itself to make the intracapsular method appeal to the operator, and the elimination of the possibility of after-cataract certainly is a source of great satisfaction to both the operator and the patient. Days and weeks of time are saved in the convalescence; within a few days the patient can return to work with good vision and with visual acuity that will improve with time instead of becoming less acute. The method is a distinct advantage to elderly persons with whom time may be a factor of great importance. Protracted convalescence in a hospital often precipitates a mental depression from which these old people never recover. The physical infirmities they have heretofore hopefully and cheerfully mastered now become manifest and dominant, so that even with improvement in vision they sometimes leave the hospital more helpless than when they entered. While as a rule elderly persons make good patients it is better to confine them to bed as little as possible, and to get them into their homes or into a homelike environment with little delay.

The greater part of postoperative complications arise from retention of lens matter in the chamber, or from delayed closure of the wound because of incarcerated shreds of capsule. It is to the marked advantage of the intracapsular method of extraction that these complications are very much reduced in frequency. Statistics show that the intracapsular method has a smaller percentage of prolapse of vitreous, prolapse of iris, iritis, and total loss than other methods of extraction, and an equal percentage of incarceration of iris, with no discission and no suppuration.

The development of intracapsular operations forms an interesting chapter in ophthalmology and should be reviewed by every surgeon who attempts cataract operations. For many years attempts have been made to perfect a method of extraction which would not leave a corneal scar, which would leave a round black pupil with no capsular nor other debris to obstruct the light. The extraction of the cataract in the capsule was first introduced by Pagenstecher in September, 1863 as a routine operation for senile cataract (Wurdemann). His method was to incise the cornea in the ordinary manner, to perform an iridectomy, and, after entering the spoon behind the lens, to exert pressure on the cornea through the lower lid. Quite as frequently he tried to express the lens by pressure without introducing the spoon, reserving the use of that instrument for cases in which the lens did not readily deliver. He selected patients whose cataracts were hard or hypermature and whom he thought could be kept under control. His vitreous loss is given as 53 per cent.

Modifications of the Pagenstecher operation have been brought out from time to time, advocated, and passed into disuse. The extracapsular method of extraction, as practiced by von Graefe, became the method of choice for most surgeons and for several years the operation was believed to be standardized. Accidents and complications had been considered as reduced to a statistical minimum, that is, losses were assumed to be about 4 per cent in the hands of good operators, and discission of after-cataract was believed to be necessary in from 40 to 60 per cent of cases. The danger of total loss or violent reaction following discission of the after-cataract had been considered liabilities which the patient had to accept; often more than one discission was necessary. Pioneer work in developing new methods of extraction was undertaken by only a few and condemned by most as subjecting the patient to unfair risk. Why should one deviate from an operation that one understands thoroughly to accept a new one admittedly harder to per-

*Presented before the Southern Minnesota Medical Association, June, 1919, Rochester, Minn.

form and in which danger of loss of sight from complication lurks in unknown and unsuspected places? Enough of the unpleasant happenings accompanying early attempts at intracapsular extraction were known to the masters of the von Graefe and other extracapsular methods to make them very cautious not only in operating but also in accepting the statement of good results achieved by those who from time to time reported cases operated on by the new method. Indeed there was little in these early reports to induce one to take up the method described. It remained for Smith to move the world by his stupendous mass of data and his insistance that he had devised an entirely new method of extraction to shake the conviction of the conservative ophthalmologist that the intracapsular method of extraction is unsafe. By many of our American and British surgeons the method as described was attacked as cruel, brutal, inhuman, unreasonable, and unoriginal. The only thing new about it seemed to be the high percentage of good results reported in a series of cases much larger than that of any other surgeon. To be sure it seemed wonderful, unbelievable, yet the logic of intracapsular extraction went home. That removal of the capsule with the lens is ideal if it can be done without too great risk had to be accepted. We were perfectly willing to admit that the greatest satisfaction and the least uneasiness were experienced when the eye was left clearly rid of all substance that might set up reaction, and that better visual results could be expected. The Smith-Indian operation was difficult to perform, however; it was better suited to the unintelligent, unemotional, easily satisfied nature of the Jullundur who could not read anyway, than to the exacting demands of people of the temperate zones of Europe and America. Then, too, there was little encouragement in the statement of the originator that "the operators outside of India who have not had a special course of training in the manipulative art connected with it, or the operator who has not had such training and whose experience is limited to a hundred cataracts a year or less, will be well advised to avoid this operation."

Very few American operators were doing more than a hundred extractions a year, yet this did not deter a few from training with the master and bringing to our people the advantages obtained by his operation. His pupils, realizing the differences in patients and hospital conditions, were quick to improvise ways to meet the principal objections to his operation, and, so far as I know, no American ophthalmologist is consistently practicing the Smith-Indian extraction in all its details as laid down by Smith. Every detail from cleansing the culdesac to the after care of the patient is claimed by Smith as of his own devising and in all fairness to him should be rigidly followed in cases purported to be done by his method. That it is not followed so consistently is not to the discredit of Smith himself, or to the theory of intracapsular extraction, but to the credit of American surgeons who are ever active in the best interests of their patients and quick to take up that which is proved to be good. The problems of lid retractors, preliminary preparation of the eye, and the first steps of the operation itself were gradually worked out. Lack of an experienced assistant to hold the lids has been met by mechanical retractors and hooks. Irrigation of the conjunctival culdesac with strong solution of mercury salts has been found to be harmless and efficient.

Smith advocated a section ending within the cornea but the limbal section upward with a small conjunctival flap has held its own place as first choice with most surgeons. The section should include a little less than half the circumference of the cornea, and the flap should begin with the section. Better and quicker union is obtained in this manner. "So uniform is the consensus of opinion upon the formation of the section and conjunctival flap that it would not repay us to spend time now on the consideration of details of relatively slight importance" (Parsons).

The question of iridectomy seems to have been settled by Smith's abandonment of the simple extraction and adoption of the iridectomy as a routine procedure. In 1912 Stanculeanu modified his operation by omitting the homatropin instillation and substituting iridectomy (Hansell). In simple extraction prolapse of the iris is a not infrequent complica-

tion that is difficult to deal with and that frequently necessitates an iridectomy or iridotomy later. The question of whether the iridectomy should be done before or after the extraction may be left to the individual surgeon. Its function is the same, namely, to lessen the danger of prolapse of the iris and to lessen the probability of subsequent glaucoma by a free interchange of fluid between the two chambers.

Attempts to devise safer methods of extraction of the lens in the capsule have given rise to the wide variation in technic found in present use. In one of the two earlier methods employed, a spoon or scoop was introduced into the vitreous and under the lens to lift the lens up against the cornea; then, by use of a spoon, pressure was applied to the cornea below the lens border and the lens was skidded through the wound. In the second method, without introducing any instrument into the eye, pressure was applied through the lower lid or directly on the globe at the lower border of the cornea, counter pressure being applied above the wound when the lens did not deliver readily or when the vitreous prolapse was unduly large. During the next few years special instruments were devised to remove the lense by pressure or by traction, or by a combination of these two methods. Among these may be mentioned the cystotome, hook, vectis, "detacher," reclinateur, spoons, glass rods, vacuum extractor, etc.

The Smith-Indian method was by pressure applied to the outside of the globe. Objections to this method, which seem to have been well sustained, are abrasion of corneal epithelium, vitreous coming out at the side before the lens is delivered, and prolapse of the iris. The latter objection was removed by doing an iridectomy. The abrasion of corneal epithelium has been reduced by the use of a delivery hook with rounded side and blunt end, but injury to the posterior corneal epithelium causing striped keratitis still remains a factor in delaying visual acuity in cases in which considerable buckling of the cornea is necessary to express the lens. Injury to the cornea was reduced by first dislocating the lens by use of a reclinateur, and vitreous loss was made much less probable by requiring less pressure than that necessary to rupture the zonula and by the use of improved lid retractors.

In 1910 Knapp began the use of the Kalt forceps to dislocate the cataractous lens, after which he expressed it by the Smith-Indian method. A year later Stanculeanu reported a method of extraction which, after the usual section and iridectomy, was characterized by grasping the anterior capsule of the lens by means of a capsule forceps made without teeth, and designed to hold the capsule without tearing it. The lens was moved from side to side and up and down, thereby rupturing the zonular attachment. The forceps was then removed and the lens delivered by pressure on the globe by the use of a spoon.

Torok noticed the firm grip taken on the capsule by the Kalt forceps and how easily the zonular attachments can be ruptured with it. He stated that if capsule forceps instead of a cystotome is used, often a hypermature cataract with thickened capsule does not rupture, but the zonula gives way and the lens is delivered in the capsule. He imitated this accidental delivery in the capsule by aiding in the rupturing of the zonula by applying intermittent pressure on the globe below the cornea by means of a Daviel spoon simultaneous with side to side movements with the forceps. As soon as the zonula ruptured, the pressure on the cornea became continuous and followed the lens, as in the von Graefe extraction, and the lens was delivered with its lower edge first. There was a loss of vitreous in only two of 37 successful extractions.

Technic of Operation

The Kalt forceps were recommended to me as being well adapted for the removal of the anterior capsule in performing the usual extracapsular extraction, and I began to use it for that purpose. In a few instances the lens became luxated and I expressed it in the capsule with a Daviel spoon after the usual manner. There was no loss of vitreous and the eye healed without incident within a very few days. I then attempted the extraction of the lens in the capsule in selected cases, grasping the capsule with the forceps and making traction as well as side to side movements; I was often

successful in pulling the intact lens through the incision without applying pressure to the globe. However, quite as frequently the capsule ruptured before the zonula gave way or as the lens was being delivered; this delivery could not be classed as an intracapsular extraction. I found that the zonula could be ruptured more easily by applying pressure below the lens by means of a Daviel spoon after the grasp of the capsule was secured, than by means of side to side movements with the forceps. Furthermore, it was evident that the lens could be raised slightly to engage in the wound even before the zonula gave way, thereby preventing the escape of vitreous around the side of the lens. Traction upward or toward the wound was combined, therefore, simultaneously with the pressure on the globe below, care being exercised not to exert sufficient traction on the capsule to rupture it. When the zonula gave way the lens immediately engaged in the wound without turning or "tumbling." Pressure with the Daviel spoon was now made to follow the lens as described by Torok until the lens was slightly more than half through; the pressure was then discontinued entirely. From this point the lens was removed by the use of the forceps alone; thus there was no pressure on the globe after the resistance to pressure was removed by birth of the lens. The iris pillars were then replaced, the conjunctival flap adjusted, and the eye closed in the usual manner.

Soon it became evident that some types of cataract are not well suited to this method of extraction. In general these fall into the classes that have been described by Knapp and Torok. Most of the successful attempts were made on sclerosed lenses; many cataracts that were thought to be best adapted to this method were found to have friable capsules with rather tough zonulas, and the amount of manipulation necessary to express them in the capsule would have been much greater than would be required to open the capsule and remove the soft part of the cortex remaining after the expression of the nucleus by stroking the cornea and irrigating the chamber. Even soft white lenses with tough capsules frequently could not be removed by this method because of the difficulty in grasping the capsule; they should, I believe, be removed by some other method. Also juvenile and traumatic cataracts are not easily removed in this manner.

Discussion of Cases

In the past eleven months 24 of 100 extractions were successfully done by combined expression and traction as described above. The extractions were all in elderly persons, mostly over sixty. The time of development of the cataract varied from six months to more than twelve years. In nine of the 24 cases, the lenses were larger and sclerosed; fifteen were soft, including immature and hypermature lenses and lenses with white fluffy looking cortices. Vitreous was lost in two cases, each time due to a squeeze by the patient before the capsule forceps were introduced. In each the vitreous loss was very small in amount. After the lens was grasped the vitreous receded and did not again appear in the wound. One patient squeezed violently as the forceps was applied, expelling the lens still in the grasp of the forceps, and without vitreous loss. Another had a deeply set eye with extremely small palpebral opening (it would not admit my smallest speculum) with atrophic conjunctiva and obliteration of the fornices from old trachoma and pannus. This patient was an old lady who desired better light perception and insisted on having an operation despite an unfavorable prognosis. As the incision could not be made with a knife it was started by a keratome and finished with scissors. The lens was hypermature and delivered easily without loss of vitreous. The patient was discharged in five days with a well healed wound; six months later she could see to get about without glasses.

The twenty-four extractions by combined expression and traction do not include several extractions in which the capsule was ruptured after the lens had engaged in the wound. This happens because of pressure on the cornea as often as from pulling on the forceps and with either soft or hard cataracts. The collapsed capsule can be removed without difficulty and the chamber irrigated to remove any retained cortex with no more inconvenience than is experienced in doing the ordinary extracapsular

extraction. One patient developed iritis with ciliary injection and pain on the third day. The complication yielded, however, to atropin and moist heat and disappeared by the tenth day. The average length of time which these patients spent under observation after the operation was ten days. Table 1 shows the visual acuity on the first refraction and does not represent ultimate results.

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DISCUSSION

DR. WILLIAM R. MURRAY, Minneapolis: First, I want to congratulate Dr. Benedict upon his modification of the intracapsular method for extracting cataract which he has described. Second, I congratulate him upon his skill as an operator, and third, I want to congratulate him upon his skill in successfully handling a complication which is likely to arise during the course of cataract extraction, whether it is done by the intracapsular or by the extracapsular method of operating. Our object in any cataract extraction, by whatever method it may be, is to obtain the best visual result with the least possible danger of complication to the patient either during or following the operation. The intracapsular method of operating fulfills the first of these requirements for a good cataract operation. There is no question about that when the operation is successful. The intracapsular operation removes the lens and removes the intact capsule of the lens, consequently it should leave a clear black pupil, and avoid the necessity or desirability of a secondary operation afterwards in order to open the pupil through the capsule which may remain as a result of an extracapsular operation. The removal of the lens with the capsule undoubtedly lessens some of the complications which may arise afterwards, such as iritis, or complications due to the presence in the corneal wound of a tag of capsule or lenticular substance which sometimes becomes impacted in the lips of the wound and delays union, and also sets up ciliary congestion and iritis. There is no doubt but what the intracapsular extraction of cataract successfully fulfills the first requirement of the best cataract operation. The extracapsular operation for cataract leaves in a considerable number of cases some capsular substance which may need future needling in order to get good and useful vision. These secondary operations should not be regarded lightly. They are not insignificant by any means, and yet I am inclined to think at the present time, with our present methods of operating, the gravity of a secondary operation has been overstated by some. I do not wish to be understood as believing that these are minor and unimportant operations, but personally I have not seen any bad results from a secondary operation on the capsule. With a secondary operation we can usually obtain very good vision. As a result of that, we have usually considered the cataract operation as satisfactory, and we usually expect, if the case is not complicated before operation, to get good and useful vision. Whether the intracapsular method of operating for cataract fulfills the second requirement of the best cataract operation is a question which I believe is still open. I do not feel that this question at the present time is satisfactorily settled.

When Colonel Smith first published the results of his operation by the intracapsular method and later published a communication along the same line, basing the results upon a number of cataract extractions which we believed at that time to be almost incredible, namely, 35,000 cases on which he had operated, some of our ophthalmologists in this country went to India to see Colonel Smith operate and to receive instruction from him, and we have with us today one of the men who went to India and saw Colonel Smith operate and was instructed by him. Most of those ophthalmologists on their return to this country were enthusiastic over the intracapsular method of operating. Some later became less enthusiastic; some of them modified Smith's method of operating with a view of lessening the possibility of complications and dangers which might occur during the intracapsular method of operating as described by Colonel Smith. Some of these modifications were along the line of improving instruments, such as lid retractors, as devised by Dr. Fisher, of Chicago, which more or less eliminate the chance of pressure upon the eyeball by the lid, which was the great source of danger in this form of cataract extraction; also a source of danger in any form of cataract extraction. Other men modified the operation in different ways, and the opera-

tion described by Dr. Benedict is one of those modifications. In the operation as described by Dr. Benedict the lens capsule is grasped by the forceps and removed by the combined method of traction and pressure upon the external surface of the globe.

DR. J. A. PRATT, Minneapolis: About two years ago we decided to change our technic in cataract operations and try to do the intracapsular operation. At that time we went to the clinics of different men who were doing the intracapsular operation and decided to follow the technic of Dr. Fisher of Chicago. We did this for two reasons. In the first place, Dr. Fisher has lid retractors which give the assistant perfect control over the lids from the beginning of the operation, and are not removed until we are entirely through. The second point is the little needle he uses, so that when the lens is presenting and would not deliver or vitreous presents, you can stick in the needle, rupture the capsule, and deliver the lens, and then you have the eye in the same condition as in the old classic operation.

Dr. Fisher has been trying to put over this operation so that ordinary operators can perform it. In the experience we have had and from what I have seen in our line of work, there is one particular thing a man ought to have, and that is touch. The pressure must be regulated, and that is where the majority of men fall down who attempt this operation, but we find it very successful. We have been careful and it has seemed very easy to us. We have done already forty-eight of these operations, and we have had one loss of vitreous, which is the bug-bear of the operation in this line of cataract extractions. We may have had a very easy run of patients but so far the results have been very satisfactory. In the next fifty cases we may not be so successful. However, we have confidence in the operation. We used the Fisher needle in the first case because we were frightened, but in the remainder of the forty-eight cases we used it only twice more, so you see it is not always necessary to use it.

Soon after we started this line of work Dr. Fisher called attention to the use of kittens eyes so that the technic could be better learned.

We have the pleasure of having Dr. Fisher with us today, and I hope he will take part in this discussion.

I believe this operation is the coming operation. I cannot see why it is not because it is successful, and we have found the Smith-Fisher operation successful in more cases than by our old method of operating. If the operator will go to work and use the eyes of kittens to master the technic, as recommended by Dr. Fisher, he will have very little trouble. Personal equation is a factor, and a delicate, skillful touch is essential. Some men can never acquire that touch.

DR WILLIAM A. FISHER, Chicago: First, I want to thank you all for the privilege of being here at this time. It has been one of the most enjoyable and profitable meetings I have ever attended. Secondly, I want to thank Dr. Benedict for his very carefully prepared paper and also for seeing his beautiful operations today and yesterday. Any of you who saw him operate will class him as I do, a very skillful operator.

Oculists all over the world, so far as I know, have been trying to remove the lens in capsule, but of course, there are difficulties in doing this, and there are also difficulties in getting the lens out after the capsule is ruptured. Some oculists believe that if they are perfectly familiar with the old operation, they will have no trouble, "but such is not the case." I have had my troubles doing the so called classical operation for twenty-five years, and I have had all kinds of complications by this method of operating, and many of these complications are serious. The members of this society may not understand that this is a surgical procedure, and not a special one for the oculist, and more cataracts are removed today in the civilized world by surgeons than by oculists. I believe this society would be more interested if this was a general surgical paper.

Some of you probably do not understand that Colonel Smith of India, is a general surgeon and not an oculist. He published an article in Ophthalmic Record 1913, in which he reported 35,000 cataract operations, and made the statement at the time that he had done more general surgery than any man living. That is a strong statement for a man to make, but Colonel Smith can substantiate it, or it can be substantiated by anyone who would consult the British bookkeeping department at Amritsar, India. He operates 365 days in the year, seldom takes a vacation but works from morning until night, and that is the reason he has done more surgery than any man living. Most of our successful surgeons go to Florida or California in the winter and play golf. "Smith works winter and summer."

Dr. Smith has been teaching the intracapsular operation to surgeons in the northern part of India for many years. They go to him to see him operate and receive instructions from him like surgeons come to the Mayos. Patients come to Colonel Smith from all over India as they come to the Mayos from all over the United States and Canada. Why do they go to Smith? Because they get results, and doctors and patients come to the Mayo Clinic because they get results. Doctors come here from all over the United States and other parts of the world for instruction and the Mayos are only too glad to give it. Patients come here from all over the country; they seem to be glad to come and the doctors are glad to send them.

I am telling you as surgeons that this is a surgical operation and you can do it just as well as the surgeons in India providing you could get the experience. Ninety per cent of the operations for cataract are done in the capsule in northern India by surgeons. A few oculists in India in the large

centers are connected with the universities, but most of the cataract operations are done by the British Army or Civil Service, or missionary doctors.

With reference to the kitten proposition, as suggested by Dr. Pratt, I will say that some of you may not understand that a six weeks old kitten has a cornea eleven or twelve millimeters in diameter, which is about the same size as the patients I saw Dr. Benedict operate upon today and yesterday. The cornea of a kitten is just as thin and just as beautiful to operate on as that of a patient. I am satisfied that if either one of the Mayos could have the privilege of going to India and see Colonel Smith do fifty or more of the intracapsular operations for cataract, and then let him operate after that upon six hundred eyes as Colonel Smith allowed me to do with the particular skill that the Mayos possess, I doubt very much whether they could secure an oculist to do the operations as well as they could do it themselves, but instead they would class the cataract operation as any other surgical procedure and do it themselves.

To become familiar with the technic of the operation you must get an eye the same size as the human eye and the eyes that are adapted to the purpose of developing technic are those of six weeks old kittens. If the Mayos would pay as much attention to kittens as they do to the other animals they have in their animal house, they could with the use of the kittens' eyes teach oculists and surgeons how to operate for cataract by any method. What a weight it would have if Dr. Benedict could teach surgeons and oculists how to do cataract operations without subjecting patients to loss of eyes. The lids can be held away from the eyeball by a lid retractor and a nurse can be taught to do it on anybody, after instilling holocain to produce anaesthesia.

The great bugbear is the loss of vitreous, but loss of vitreous occurs in the old operation as well as in the new, and it happens in the hands of skilled operators.

The excellent article by Dr. Benedict will have great weight and do much toward placing the intracapsular operation in a place at the top where it belongs, and coming as it does from the Mayo Clinic will give it justly added importance.

From every stand, I believe the intracapsular operation for cataract will be the one of choice in the future by all who master the technic.

DR. BENEDICT (closing the discussion): I wish to thank Dr. Murray and Dr. Fisher for their kind remarks in discussing this operation. I have not brought out a new operation. Most of the details of the operation I have described were worked out four or five years ago and may be considered refined steps of both the intracapsular and other methods. There seems to be more or less of a hew and cry about the Smith-India method because a great many men of skill have attempted it and have given it up for some modification. Whether it is due to a lack of skill or lack of experience, or to a departure from the technic as laid down by Smith, I do not know. The operation I have described is a matter of development. Advancement has been made through the efforts of Dr. Fisher, Dr. Green, and Dr. Vail, and others. I think a few more refinements will gradually lead us back closer and closer to the original Smith operation as the method of choice.

A SIMPLE BUT EFFICIENT METHOD FOR THE TREATMENT OF BURNS

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Browns Valley, Minn.

Many new methods for the treatment of burns have been introduced to the medical profession of late years but practically all have been discarded after a few unsatisfactory trials and the surgeon has reverted back to the time honored but inefficient use of carron oil.

The object of this paper is to put in the hands of the practicing physician a simple but highly efficient method of treating burns in which infection is quickly overcome and healing is rapidly instituted.

In October, 1918, Mr. John La Penotiere, pharmacist at the Minneapolis City Hospital, asked me if I would try out a preparation which he had made up for the treatment of burns. The method to be followed was similar to the method used in the application of Abbot's Parresine.

Mr. La Penotiere's preparation is of a waxy consistency with a melting point of 120° Fahrenheit. This is melted over a water bath and kept at 120° Fahrenheit during the application. The can be easily done in the ordinary sterilizer, care being taken to keep the cover of the sterilizer open to prevent the entrance of water of condensation into the vessel containing the paraffin.

The burned area is first gently cleaned with Dakin's solution, the gross particles of charcoal, fragments of burned cloth and other debris being removed with a thumb forceps. The area is then gently dried with sterile compresses. A coating of the paraffin is then quickly painted over the area with a two-inch camels hair brush. A thin layer of sterile sheet wadding of the same shape as the burned area is then applied and another layer of the paraffin preparation is then painted over the sheet wadding. If the sheet

wadding is thin enough, the dressing is held firmly in place, is neat and airtight. The dressing is kept in place more firmly by the application of an ordinary gauze bandage.

The dressing must be re-applied daily until healing is complete, care being taken to first wash the area with Dakin's solution.

In October, 1918, a man 35 years of age, came into the receiving room at the Minneapolis City Hospital with a badly infected second degree burn of the forehead, nose and cheeks, of three days duration. He had been burned by the accidental ignition of a pair of celluloid rimmed spectacles. It had been treated first by a private physician with carron oil.

The above method was used and he was told to report the next day. The second day a layer of pus was present between the dressing and the burned surface. This was washed off with Dakin's solution and a new application of the paraffin dressing was made. On the third day the pus was markedly decreased. On the fourth day the pus was absent but a thin layer of serum was present. Many small islands of skin (pinhead in size) were present over the affected area. These rapidly increased in size until the eighth day when the area was covered by a healthy layer of new skin. On the tenth day the dressing was removed and a thin layer of cold cream was applied. The patient reported again two weeks later. The new skin had almost resumed its normal appearance. The patient was not seen again.

The second patient on whom the new preparation was tried was a man aged 42, a railroad engineer by occupation. While sleping in his home, his bed clothes caught fire from an unknown cause and he suffered second and third degree burns of the chest, arms, neck and face.

The paraffin preparation was applied as described above and the patient admitted to the hospital. The course was the same as in the first case.

The remarkable point about the second case and one which we found to be true in every subsequent case which we treated immediately following the burn, was that although the patient was suffering intense pain when first seen, as soon as the area was entirely covered with the paraffin preparation the pain was almost completely alleviated. Incidentally, pain was an unknown factor in the daily changes of the dressings.

Since then, this paraffin preparation has been used as the routine treatment for burns at the Minneapolis City Hosptal.

The formula for preparing the paraffin dressing is as follows:

1. Resorcinol 10
2. Olei Eucalyptii 20
3. Olei Olivae 50
4. Petrolatum 250
5. Paraffin 670

Melt 4 and 5 together.

Dissolve 1 in alcohol and add to 4 and 5 while latter is hot, to drive off the alcohol. When cool, add 2 and 3.

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EDITORIAL

FUNDAMENTALS OF A MATERNAL WELFARE PROGRAM

Any complete health and social welfare program should include two Public Welfare activities, those of Maternal and Infant Welfare, which are closely related and should be very carefully coordinated. These activities are intimately bound up with the family and concern particularly the mother and child. While these two sub-programs are more or less closely related to all the other public welfare work, they have more points of contact with each other than with the rest of such activities. From an administrative viewpoint these two activities could be combined in a Maternal and Child Welfare program but from a medico-social standpoint the work should be handled by experts in the different lines of work.

The contact between these two phases of work may be termed "Pre or Antenatal Care". This implies care of both the prospective mother and child. It should be supervised by a doctor with helpers who are especially competent to direct and to deal with the problems of "Prematernity". From the viewpoint of Infant Welfare workers, the results to be obtained from this care of mothers are 1°—the lowering of infant mortality, especially the early mortality, 2°—the lessening of morbidity to the lowest possible level, 3°—the handling over of a healthy child as early in its life as practicable with its mother able and fit to care for and nurse it and to a doctor who is competent to deal with the many problems of infant life.

Prenatal work is a small part of the Maternal Welfare program, for the latter involves many activities of various kinds.

The objects of the Maternal Welfare Program are 1°—to develop healthy parents, especially mothers who are intelligently trained; 2°—to bring them through life to maturity capable of having and rearing normal children; 3°—to reduce the maternal, fetal and newborn mortality and morbidity to the lowest possible level, 4°—to leave the mother with a desire and capacity to bear and rear children properly in a sufficient number and of such a quality as not only to maintain the integrity of the human race but to constantly improve its character.

This implies the improvement of the individual by bettering his antecedents, by protecting him from the folly and ignorance of his progenitors. It means the study, investigation and application of principles which will remove conditions which affect future generations badly and create those which tend to improve the offspring.

It is desirable that in the dependent stage of their lives individuals should be so cared for that they will pass through infant, child and young adult life into maturity with minds and bodies as nearly perfect as possible and so trained as to be able to give their offspring the best possible care, besides transmitting to them a legacy of sound body and mind.

Parents should have good antecedents, a good environment, be properly reared, educated and taught not only the care of themselves but of those for whom they are responsible and with whom they are associated in life.

This suggests the next phase by which we seek to protect individuals from the acts of others by means of certain laws and regulations affecting their conduct. This is of course part of a general welfare legislative plan, but there are many special problems which affect women and especially prospective mothers, which have to be very thoroughly understood and carefully worked out. It must not be forgotten, however, that all public welfare work, while it has definite and concrete results on the existing

generation, has a more permanent effect on future generations and is therefore intimately associated with problems of heredity.

The family should be protected from various detrimental influences by education, legislation, and proper help and advice. This means that each family should have a normal economic status, proper housing, etc., good sanitary surroundings, proper advice, and care in case of physical or other needs resulting from disease, economic reverses, or distress of any kind. Some of the medical problems which vitally affect the individuals and the family are those dealing with tuberculosis and venereal diseases. These activities are very closely allied to Maternal Welfare work.

A comprehensive Maternal Welfare program should include investigation into both medical and social problems. This virtually constitutes a study of many problems connected with the production of human life. Some of these medico-social problems which vitally affect the individual, the family and the community, are those relating to sterility, whether apparent or real, to abortion, to premature births, and still births, whether ante or post-partum. A study of causes and methods of controlling promiscuous sexual relations and from a medical standpoint investigation into methods of eradicating venereal diseases is of the utmost importance.

An analysis of the causes and practical application of the principles for preventing the development and transmission of degeneracy, insanity and physical defects would be of great benefits to the human race.

A careful and unbiased study of the causes of economic insufficiency of the family with its disastrous effects on the mother and children is one of the fundamental problems of maternal and infant welfare. An investigation of the causes underlying the diminishing birth rate resulting from increasing sterility, abortions, desire to limit the size of families, etc., is of prime importance to many countries.

Of medical problems which need special investigation, there are many. Practically all conditions which complicate pregnancy, labor and post natal conditions in mother or child need further study. Many of these are practically unexplored fields. Of the cause of eclampsia we are ignorant. We know practically nothing of the physiology and pathology of the child developing in utero and the effect of maternal environment, habits and disease on the fetus.

The Educational Program involves the education of young adults along proper sex lines. This necessitates careful study and thought in laying out the educational program as well as in selecting those who are to give this instruction. It includes the education of prospective fathers and mothers in the physiology, hygiene, pathology, psychology and sociology, of maternity and infancy.

Of the highest immediate and practical importance is the proper education and training of those who give prenatal, natal, and post natal care to mother and infant. This includes doctors, midwives, nurses and social workers and the institutions which are responsible for their training.

The Legislative Program includes those laws which are designed to protect the family unit in health, economic independence and happiness, or to prevent any invasion by medical or social disease. The mother must not be forced into conditions of existence which will be detrimental to her or the future child. This means provision for proper maintenance, good living conditions, protection from disease, improper work, etc. Laws should protect the unborn child from death, disease, and harmful influences, insofar as this can be accomplished. Legislation should provide for the license and proper inspection of institutions and individuals to whom the care of mothers and babies is entrusted. There should be some assurance that they are properly trained and capable of carrying on their work.

Some provision must be made for the necessary institutions which include in addition to the educational institutions for training special workers, others such as special medico-social centers in connection with communal activities. There should be close association and coordination between the medical, social and educational work in these centers from which all medical and social activities in a given area should emanate.

Maternal Welfare work should include some institution for the education of prospective parents, especially the mothers, where talks

and demonstrations give them the necessary knowledge of themselves and their babies. Home visitors should go from these centers to the home where the women can be advised and taught.

Provisions should be made to furnish proper prenatal, natal, and post natal care in the home for both mother and infant.

There must be consultations for prenatal, post natal, and other necessary medical, dental, nursing and social care. It is necessary to have Prematernity Homes and Hospitals, as well as Maternity and Gynecological Hospitals. Post Natal Homes are necessary for those who need care for medical or social reasons. Public Welfare activities are so intertwined that it is impossible to isolate one from another, but there is not a more basic work in the whole plan than that of Maternal Welfare. The mother is the keystone of the family unit and the whole arch of human welfare and progress is sustained by the weight which rests from all sides on that keystone.

F. L. A.

REPORTS AND ANNOUNCEMENTS OF SOCIETIES

MINNESOTA PATOLOGICAL SOCIETY

THE MINNESOTA PATHOLOGICAL SOCIETY held a meeting on Tuesday evening, October 21, at the Institute of Anatomy. This is the first meeting held after an interruption of a year. The program consisted of presentation of specimens as follows: Dr. E. T. Bell presented specimens of cardio-vascular conditions; Dr. M. Barron presented a specimen of pancreatic calculus; and Dr. H. E. Robertson presented a lipoma myxomatodes with recurrence in the same locality after an interval of two years.

The main paper of the evening was presented by Dr. Louis B. Wilson of Rochester on "The autopsy service in the A. E. F." This paper was discussed by Dr. H. E. Robertson.

F. L. ADAIR, Secretary.

ANNUAL MEETING SOUTHERN MINNESOTA MEDICAL ASSOCIATION

December First and Second, 1919, Mankato, Minn.

OFFICERS

John Williams, Pres., Lake Crystal, Minn.
W. E. Sistrunk, 1st, V. P., Rochester, Minn.
W. J. Richardson, 2nd V. P., Fairmont, Minn.
H. T. McGuigan, Sec., Red Wing, Minn.
G. F. Merritt, Treas, St. Peter, Minn.

The C. N. W. R. R. will have special coaches for the physicians attending the meeting.

Arrangements are being perfected for a special on the C. St. P. M. & O. R. R. to leave Minneapolis at 3:00 P. M. and arrive at Mankato at 6:00 P. M.

EVENING SESSION

Monday, December 1st, 1919

Auditorium Elks Club

Annual Banquet—Masonic Hall.

President's Address—The Activity of the Southern Minnesota Medical Association in Public Health. John Williams, M. D., Lake Crystal, Minnesota.

The Surgical Treatment of Bunions.—Chas. H. Mayo, M. D., Rochester, Minn.

Discussion by—H. W. Meyerding, M. D., Rochester, Minn.; A. R. Colvin, M. D., St. Paul, Minn.

The Treatment of the Second Stage of Labor, with Special References to the Prevention of Injury to the Child and to the Pelvic Floor.—J. B. DeLee, M. D., Chicago, Ill.

Discussion by—Fred L. Adair, M. D., Minneapolis; Wm. H. Condit, M. D., Minneapolis.

Technic for the Removal of Intrathoracic and Substernal Goiters.—Edward S. Judd, M. D., Rochester, Minn.

Discussion by—Archa E. Wilcox, M. D., Minneapolis, Minn.; Wm. C. Carroll, M. D., St. Paul, Minn.

Some Applications of the Principle of Focal Infections Including a Technique Applicable to Dental Infections.—Arthur D. Dunn, M. D., Omaha, Nebraska.

Discussion by—W. L. Shearer, D. D. S., Omaho, Nebraska; E. S. Rosenow, M. D., Rochester, Minn.; Boyd S. Gardner, D. D. S., Rochester, Minn.

Experimental Studies on Etiology of Influenza.—E. C. Rosenow, M. D., Rochester, Minn.

Discussion by—W. P. Larson, M. D., Minneapolis, Minn.; Kano Ikeda, M. D., Minneapolis, Minn.

Tuesday, December 2nd, 1919, 8:00 A. M.

FORENOON SESSION

Auditorium Elks Club

Recent Studies Upon the Therapeutic Application of Benzyl Alcohol Benzyl Benzoate and Some Homologous Compounds.—A. D. Hirschfelder, M. D., Minneapolis, Minn.

Discussion by—E. T. F. Richards, M. D., St. Paul, Minn.; H. Z. Giffin, M. D., Rochester, Minn.; J. C. Litzenberg, M. D., Minneapolis, Minn.

Acute Perforation of Stomach and Duodenum.—N. O. Ramstad, M. D., Bismarck, N. Dak.

Discussion by—R. E. Farr, M. D., Minneapolis, Minn.; J. S. Holbrook, Mankato, Minn.

Tuberculin in the Recognition of Obscure Tuberculosis.—J. H. Stokes, M. D., Rochester, Minn.

Discussion by—S. E. Sweitzer, M. D., Minneapolis, Minn.; J. G. Cross, M. D., Minneapolis, Minn.

A Modified Inguinal Hernia Technique. (L.)—George Earl, M. D., St. Paul, Minn.

Discussion by—Verne Hunt, M. D., Rochester, Minn.; W. A. Dennis, M. D., St. Paul, Minn.

Conditions Contraindicating Operation with Stone in the Kidney and Ureter.—W. F. Braasch, M. D., Rochester, Minn.

Discussion by—Oscar Owre, M. D., Minneapolis, Minn.

Modern Conceptions Regarding the Radical Mastoid Operation.—Horace Newhart, M. W., Minneapolis, Minn.

Discussion by—W. R. Murray, M. D., Minneapolis, Minn.; Carl L. Larsen, M. D., St. Paul, Minn.; R. A. Barlow, M. D., Rochester, Minn.

The Relation of Hepatitis to Cholecystitis. (L.)—Wm. Carpenter MacCarty, M. D., Rochester, Minn.

Discussion by—E. T. Bell, M. D., Minneapolis, Minn.; A. W. Sohmer, M. D., Mankato, Minn.

Lesion of the Knee Joint. —Emil S. Geist, M. D., Minneapolis, Minn.

Discussion by—A. A. Law, M. D., Minneapolis, Minn.; J. R. Kuth, Duluth, Minn.

Tuesday, December 2nd, 1919

AFTERNOON SESSION

The Treatment of Diabetes Mellitus.—L. G. Rowntree, M. D., Minneapolis, Minn., Prof. of Medicine, University of Minnesota.

Discussion by—D. M. Berkman, M. D., Rochester, Minn.; J. P. Schneider, M. D., Minneapolis, Minn.; S. Marx White, M. D., Minneapolis, Minn.

The Surgical Treatment of Gummatous Osteitis of the Skull.—A. W. Adson, M. D., Rochester, Minn.

Discussion by—Gilbert J. Thomas, M. D., Minneapolis; A. R. Colvin, M. D., St. Paul, Minn.

The Diagnosis of Cardiac Disease.—Jas. S. Gilfillan, M. D., St. Paul, Minn.

Discussion by—John E. Hynes, M. D., Minneapolis, Minn.; W. D. Sheldon, M. D., Rochester, Minn.

Clinical Study of Gastrojejunal Ulcer.—Geo. B. Eusterman, M. D., Rochester, Minn.

Discussion by—Hugh Willson, M. D., Minneapolis, Minn.; M. H. Cremer, M. D., Red Wing, Minn.

Lethargia Encephalitis.—E. M. Hammes, M. D., St. Paul, Minn.

Discussion by—W. A. Jones, M. D., Minneapolis, Minn.; A. W. Morrison, M. D., Minneapolis, Minn.

The Value of the Study of Blood Pressure in General Practice.—J. W. Andrews, M. D. Mankato, Minn.

Discussion by—John W. Bell, M. D., Minneapolis, Minn.; Chas. L. Greene, M. D., St. Paul, Minn.

CORRESPONDENCE

AN APPEAL FOR HUMAN EMBRYOLOGICAL MATERIAL

By William W. Graves, St. Louis

In 1906 I observed certain malformations of the human shoulder-blade, and in contributions to current literature I have given them the collective name —"the scaphoid type of scapula," and pointed out some of its hereditary, clinical and anatomical significance.

Probably the most important observation connected with this type of scapula in man is its age incidence, that is to say, it occurs with great frequency among the young and with relative infrequency among the old. There appear to be two possible explanations of this fact:

either

A—one form of shoulder-blade changes into the other during development and growth,

or

B—many of the possessors of the scaphoid type of scapula are the poorly adaptable, the peculiarly vulnerable, the unduly disease susceptible—the inherently weakened of the race.

I have attempted to answer these questions by seeking evidence in various directions and one of the most important of these has been a study of intrauterine development of shoulder-blades. My investigations in this direction have been limited by the material at my disposal, which has been inadequate for a definite solution of this phase of the problem. I am, therefore, appealing to physicians for fetuses in any and all stages of human development.

It is desired that the material, as soon as possible after delivery, be immersed in 10 per cent formalin in a sealed container, and be forwarded to my address; charges collect. Due acknowledgment will be made to those forwarding material.

OBITUARY

DR. ANGUS MacDONALD

Dr. Angus MacDonald, for fifty years a resident of St. Paul, died at his home October 11th. He practiced medicine in St. Cloud before locating in St. Paul. He is an uncle of Dr. A. E. MacDonald of Minneapolis. Besides his widow he is survived by three sons, Edward and Rupert of St. Paul and George of Salt Lake City.

DR. FRANK O. SHERWIN

Dr. Frank O. Sherwin died at his home in Duluth on October 24th at the age of 66 years. Dr. Sherwin graduated from the Rush Medical College in 1880 and after practicing at Lawler, Iowa, for a short time he came to Duluth where he has resided since. A widow and one daughter survive him.

OF GENERAL INTEREST

Dr. C. A. Rathbun of Rice has located at Sauk Rapids.

Dr. H. T. Sherman of Minneapolis has located at Franklin.

Dr. W. W. Brown of Cottonwood has removed to Marshall.

Dr. R. V. Williams of Rushmore will locate in Peterson.

Dr. John L. Mulber of Rock Valley, Iowa has located at Chaska.

Dr. Arthur Bratrud of Grand Forks, N. D. has removed to Minneapolis.

Drs. Kirsch, Norman and Drydxn of Crookston have entered into partnership.

Dr. and Mrs. G. R. Pease of Redwood Falls have gone to California for the winter.

The board of county commissioners of Nicollet county have purchased the Field Hospital.

Dr. B. S. Adams of Hibbing has been elected a member in the American College of Surgeons.

Dr. F. O. Folken of Omaha has moved to Albert Lea and become associated with Dr. H. D. Burns.

Dr. Leo Maguire of Minneapolis was awarded the Belgium croix de guerre by King Albert of Belgium.

Dr. G. DeJong of Morris, Iowa, has been appointed a member of the staff at the State Hospital at Fergus Falls.

Dr. W. J. Kucera of Montgomery was married October 4th to Miss Florence M. Wilson of San Antonio, Texas.

Dr. and Mrs. W. A. Allen of Rochester celebrated their sixty-fifth wedding anniversary at their home on October 25th.

Dr. Ida M. Alexander of Sauk Center has located at Bismarck, N. D. She has been appointed executive officer of that state.

Dr. N. D. Carter of Texas has entered the City Hospital at Worthington and will be associated with Dr. Henry Wiedow.

Dr. W. E. Braasch of Rochester has been elected a member of the council of the Minnesota State Medical Association.

Dr. Ward Akester of Marshall has been appointed medical officer for Lyon county by the United States Public Health Service.

Dr. D. S. Fleischhauer has been appointed Medical Examiner for the Bureau of War Risk Insurance in the county of Wabasha.

Dr. D. E. Nelson, who served in the medical corps for fifteen months returned to Brainerd where he will resume his practice.

A bulletin entitled "Water Supplies and Sewerage Systems for Farm Residences" is now being distributed by the State Board of Health.

Dr. R. W. Huffman of Stewartville who has recently returned from a year's service with the Canadian army, has decided to locate at Elgin.

Dr. Harry A. Britton, assistant superintendent of the City Hospital of Minneapolis has resigned. He will leave the hospital December 15th.

Dr. C. F. Lewis returned to Austin after a two weeks trip to New York where he attended the Clinical Congress of American College of Surgeons.

The rate for patients in the pay ward service is $15.00 per week with additional operating room charge of $6.00 and further charges for certain drugs, Xray and so forth.

Dr. Paul W. Giessler has resumed civil practice and announced the opening of his offices at 303 La Salle Bldg., Minneapolis. He will limit his practice to orthopedics.

Dr. R. E. Farr read a paper entitled "Necessity for and some methods of enlarging the scope of local anesthesia" for the Wayne County Medical Society of Detroit, Michigan on October 27th.

The University Hospital announces that a pay ward service has been inaugurated with a limit of fifty ward beds. This service provides for individuals who are able to pay moderate hospital expenses, but who would be unable to pay both hospital and physician's fees. The patients are subject to the rules of the hospital, and agree to submit themselves for clinical study, just the same as though they paid nothing.

The following is from the report of President Burton of the University of Minnesota, for the year ending June 30, 1919, recently made public.

The time has come when the University must face decisively the question of hospital expansion in the Medical School. In fact, this problem involves the entire educational policy of the Medical School, and in a very real sense, the future medical education in the Northwest. The whole question of medical training has been passing through an interesting evolution in recent years. The report of Abraham Flexner on Medical Education in the United States helped to bring about a marked improvement. Experience with the principle of full-time teaching has shown some interesting results. It is quite evident that two rather well formed conclusions are emerging: (1) that any plan which entirely prevents a clinical professor in the Medical School from practicing his profession is unwise, and (2) that plans must be developed and facilities must be provided whereby such a member of the medical faculty may give his chief time and interest to his educational work, but will have opportunity for a limited amount of private and consulting practice. These principles, if sound, present a very difficult problem to a medical school in a state university. It is logical to maintain that a professor of medicine must keep his contact with the profession, that he must have the benefit of actual practice, and that he must have a sufficient income to meet his financial needs and professional responsibilities. It is in the interests of sound educational policy to require a member of the medical faculty to make teaching and research his first task. The elements of the problem are further complicated in a university by the fact that full time clinical teachers can not be secured and retained for salaries usually paid to university professors in other fields. It is generally conceded, and has been for some time, that the salaries of teachers in some of the professional schools must be higher than in other colleges of the universities. This particular principal, however, is taking on a new phase and is beginning to be applied not only to Law and Medicine, but also to Engineering, and more recently to members of the staff of the new professional School of Business. But even this principle does not meet the situation fully in the Medical School. The average salary of professors in the University as a whole may be approximately $3,300, while the salaries of professors of Law and Medicine range from five to six thousand; and even then the medical situation is critical. The way out seems to lie in the direction of engaging the approximately full-time clinical teacher on the basis of a moderate salary and to combine with it the privilege of engaging in a reasonable amount of private and consulting practice. Such a plan has two advantages: (1) it gives the member of the medical staff increased facilities for maintaining his professional contact and standing and (2) it provides a channel by which adequate and reasonable financial income may be secured.

We come now to the heart of the problem. If such a professor is to utilize his time and energies in a wise and effective manner, he must have at his disposal and close at hand hospital facilities for the care of his patients. In our Elliot Memorial Hospital, however, our plans provide for only free and per diem patients. The private patient is rigidly excluded. Therefore, the logic of the situation leads irresistibly to the conclusion that hospitals must be provided in which private patients of the members of the staff together with per diem patients can be cared for, or the University is compelled frankly to abandon the plan of full time clinical teachers. The issue is clearly drawn. For the sake of the part-time men, as well as the so-called full-time men, the latter alternative is unthinkable. But one further difficulty besets us. For the present, and particularly in view of the adoption of the comprehensive building plan, the state can not be expected to provide hospitals for the private patients, even of members of the staff. Therefor, by the very nature of our problem we are driven to the necessity of recognizing that this type of hospital expansion must be provided for by private gifts. This University at once must seek from one half to three quarters of a million of dollars for hospital expansion with the necessary accompanying provision for the housing of nurses and caring for the administrative and service features. It should be pointed out at once that such a hospital would be self-supporting, even to the extent of providing for overhead charges. It would make possible the carrying foward of plans already adopted in this University. It would hasten the development of a diagnostic clinic. All types of patients—free, per diem, and pay patients—would be given the very best care. The position here taken is unquestionably the logical answer to our present situation. The problem of hospital extension demands immediate action. No citizens could render a more important service to the University, nor do more to ensure its high place in the Northwest than by providing generously by private gift for the expansion of our hospitals. In the Elliot Memorial Hospital we now have one hundred and ninety-two beds, fifty of which are on the per diem basis. We should have at least five hundred and fifty beds. What the University of Michigan has done we can do. Policies which are successful in other state universities should prove feasible here. The administration stands ready fully to cooperate with the Medical School in bringing about an immediate and adequate expansion of its hospital facilities.

NEW AND NON-OFFICIAL REMEDIES

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Abbott Laboratories:
Tablets Cinchophen-Abbott 7½ grains.
Calco Chemical Co.:
Albutannin-Calco.
Acetannin-Calco.
Cereo Company:
Soy Bean Gruel Flour.
Gilliland Laboratories:
Antipneumococcic Serum Combined Types 1, II and III.
Antistreptococcic Serum.
Hynson, Westcott & Dunning:
Acriflavine (Boots).
Proflavine (Boots).
Merck & Co.:
Albutannin-Merck.
Takamine Laboratory, Inc.:
Hirathiol.

Typhoid Paratyphoid Bacterial Vaccine, Immunizing Gilliland.—Marketed in packages of three 1 Cc. ampules, one containing 250 million each killed paratyphoid A and B and 500 million killed typhoid bacilli, and two containing 500 million each killed paratyphoid A and B and 1,000 million killed typhoid bacilli, and in packages of three 1 Cc. syringes, one containing 250 million each killed paratyphoid A and B and 500 million killed typhoid bacilli, and two containing 500 million each killed paratyphoid A and B and 1,000 million killed typhoid bacilli. Gilliland Laboratories, Ambler, Pa. (Jour. A. M. A., Oct. 11, 1919, p. 1137).

Hirathiol.—An aqueous solution of a synthetic product, the important medicinal constituents of which are ammonium compounds containing sulphur in the form of sulphonates, sulphones and sulphides. It is claimed that hirathiol is equivalent in every respect to the original ichthyol; hence, its actions, uses and dosage should be similar to that of the older preparation (see Sulphoichthyolate Preparations, New and Nonofficial Remedies, 1919, p. 319). Hirathiol is a syrupy, brownish-black liquid, having a characteristic empyreumatic ordor. It is soluble in water, glycerin and alcohol. It is miscible with fats. Takamine Laboratory, Inc., Clifton, N. J.

Soy Bean Gruel Flour.—A flour prepared from the soy bean, having approximately the following composition: protein, 44; fat, 20; sucrose, 10; ash, 4.3; fiber, 2; water, 4.6. Soy bean gruel flour may be used for preparing muffins. It is indicated in cases in which a diet relatively free from carbohydrates is desired, as in diabetes, amylaceous dyspepsia, etc. It has also been suggested for the diet in obesity. Cereo Company, Tappan, N. J. (Jour. A. M. A., Oct. 18, 1919, p. 1215).

Antistreptococcic Serum-Gilliland.—The serum of horses which have been immunized with virulent strains of hemolytic streptococci. Each package bears the statement "No U. S. Standard of Potency." Marketed in 10 Cc. syringes, 20 Cc. injecting packages and 50 Cc. injecting packages. Dose: 10 to 200 Cc. (See New and Nonofficial Remedies, 1919, p. 272). Gilliland Laboratories, Ambler, Pa. (Jour. A. M. A., Oct. 25, 1919, p. 1287).

PROPAGANDA FOR REFORM

Formaldehyde Tablets.—During the recent influenza epidemic a variety of tablets or lozenges were advertised which were claimed to owe their asserted value to the fact that they contained formaldehyde and liberated it on contact with the saliva. Tablets containing hexamethylenamine or other formaldehyde compounds can neither cure respiratory infection, nor even confer a protection against such infection. To be effective, formaldehyde would need to be supplied to the entire respiratory tract continuously for some time, or else in concentrations that would be distinctly irritant and damaging to the tissues. Some years ago, the Council reported on the inefficiency of Formamint, which was said to be an efficient germicide by virtue of the liberation of formaldehyde on contact with the saliva. To call attention to the inefficiency of this form of medication, the Council on Pharmacy and Chemistry now reports that the following were found inadmissible to New and Nonofficial Remedies: Hex-Iodin (Daggett and Miller Company, Inc.), Formotol Tablets (E. L. Patch Company) and Cin-U-Form Lozenges (McKesson and Robbins) (Jour. A. M. A., Oct. 4, 1919, p. 1077).

Solubility of Intestinal Ipecac Preparations.—T. Sollmann reports that in the administration of ipecac preparations against intestinal amebas, salol coated pills are not always satisfactory, although with due care, it appears quite feasible. He reports that emetin bismuth iodid, which is described in New and Nonofficial Remedies, is only slightly soluble in water and dilute acid, but dissolves quite freely in one per cent sodium bicarbonate solution. It is somewhat soluble in the stomach and produces some digestive disturbances. Alcresta ipecac, an adsorption product of ipecac and fuller's earth, though sold with the claim that the alkaloids are "physiologically inert as long as they remain within the stomach, and are rendered active when set free in the alkaline media of the intestine," was found by Sollmann not to be decomposed with liberation of alkaloid by solutions having the alkalinity of the intestinal fluid. Ordinarily, it would not be expected that a substance which is quite insoluble in the intestines should still be effective on amebas. The findings of Sollmann demand a careful examination of the clinical evidence on which the use of alcresta ipecac is based (Jour. A. M. A., Oct. 11, 1919, p. 1125).

More Misbranded Nostrums.—Rubino Healing Springs Lithia Water was found misbranded under the Federal Food and Drugs Act because it did not contain enough lithia to entitle it to the name "lithia water" and because of false claims as to its therapeutic value. Lower's Hot Springs Pure Blood Remedy was declared misbranded because it was falsely represented to be a treatment or remedy for syphilis, paralysis, catarrh, eczema, malaria and other diseases. Analysis showed it to be a weak alcoholic solution containing sugars, small amounts of chlorides, iodides and sulphates (probably as the sodium salt), and vegetables extractives, among which are podophyllum and an atropin-bearing drug. Kuhn's Rheumatic Specific was declared misbranded because it was sold as a cure for all forms of rheumatism, neuralgia, blood diseases, lumbago, etc. It was found to be a water-alcohol solution containing essentially potassium iodid, iodin and sugar with indications of small amounts of plant material and aromatics. Schade's Specific and Female Regulator was declared misbranded because the therapeutic claims for this "female regulator" was found false. It was a water-alcohol solution containing chiefly sugar, aromatics, essential oils, licorice and bitter plant extractives (Jour. A. M. A., Oct. 11, 1919, p. 1151).

The William A. Webster Company and the Direct Pharmaceutical Company.—The Direct Pharmaceutical Company of St. Louis is apparently merely a sales agency for the William A. Webster Company of Memphis, Tenn. In government bulletins issued in October, 1913, there were reported some cases of adulteration and misbranding on the part of the William A. Webster Company. In a similar bulletin issued in August, 1914, there were reported several more cases of adulteration and misbranding charged against the William A. Webster Company. In a government bulletin issued in June, 1917, the same company was charged with adulterating and misbranding Aspirin tablets (Jour. A. M. A., Oct. 18, 1919, p. 1231).

An Uncritical English Endorsement of Collosols.—Under the auspices of the English Association for the Advancement of Science, there has appeared a report on the present status of colloidal chemistry. A chapter on the "Administration of Colloids in Disease" is devoted largely to the "Collosols," proprietary preparations made by the Crookes Laboratory. In it, the advertising "literature" of the Crookes concern appears to have been considered ample source of information. In the United States the medical profession has been informed by the Council on Pharmacy and Chemistry that a number of the "Collosol" preparations were not colloids at all and "if . . . . injected intravenously as directed, death might result, making the physician morally if not legally liable." The Council also reported that in cases in which the therapeutic claims were examined, the claims were improbable or exaggerated and that "Collosol Cocaine" did not contain the claimed amount of cocain (Jour. A. M. A., Oct. 18, 1919, p. 1218).

The Patenting of New Therapeutic Agents.—Enterprising pharmaceutical manufacturers have usually been ready to appropriate the results of scientific research by investigators or therapeutic measures suggested by practicing physicians. Not infrequently, in such cases, the desire for financial gain has caused the marketing of such products with extravagant, if not false, claims as to their value. Therefore, though it is unethical for physicians to receive remuneration from patents on medicines or instruments, it is important that new therapeutic agents discovered in our research institutions be protected by patenting them and thus to so control them that they may be available without subordination to commercial interests. In 1914, the House of Delegates of the American Medical Association passed a resolution to the effect that the board of trustees of the Association should accept at its discretion a patent on a medicine or surgical instrument, as trustee, for the benefit of the profession and the public, provided that neither the association nor the patentee should receive remuneration for this patent. The Rockefeller Institute for Medical Research has solved the problem in a similar manner. Certain products discovered there have been patented. It is proposed to permit the manufacture of such discoveries under license by suitable chemical firms and under conditions which will insur the quality of the drugs and their marketing at reasonable prices. It is further announced that the Institute will not receive any royalties or pecuniary benefits from the licenses it issues (Jour. A. M. A., Oct. 18, 1919, p. 1219).

Anasarcin Advertising.—Dr. Louis Teitzman reports that charts and part of the text of a book by him is being used as advertising by the Anasarcin Company, and that his publishers think that, in spite of the violation of copyright, nothing can be done. Knowing the standards of ethics the Anasarcin Company adopts in the exploitation of its ridiculous squill mixture "Anasarcin," the appropriation of copyrighted material is not surprising. However, something can be done by those who hold the copyright (Jour. A. M. A., Oct. 18, 1919, p. 1282).

P. Presto Company.—This company, also known as "The Presto Manufacturing Company" and "The Presto Company" was a mail order concern operated from Albany, Oregon, by one Edward F. Lee. Lee is now in the penetentiary, and the Presto Company has been debarred from the U. S. mails. Lee's business was that of selling on the mail order plan what he termed his "New Method Treatment for Sexual Weakness and Varicocele in Men" (Jour. A. M. A., Oct. 25, 1919, p. 1302).

An Insidious Influence.—A knock at the door. A gentleman with a grip full of samples and literature is ushered in. After a pleasant chat in which you are "informed" about the action of the particular remedies in which he is interested, he leaves you samples and departs. You turn to New and Nonofficial Remedies and find no mention of his remedy. Why? Because the Council on Pharmacy and Chemistry of our national organization has investigated the article and found sound reason why it should not be used by the profession, or else, the manufacturer did not deem it advisable even to submit the article (Minnesota Medicine, Sept. 1919, p. 355).

A Pharmaceutical Clearing House.—The Council on Pharmacy and Chemistry of the American Medical Association is carrying on a work of great usefulness to doctor and layman. Actuated by no selfish interests, condemned by designing sharks who wish to exploit their frauds, and ridiculed by the jealous manufacturers of pharmaceuticals, the Council pursues the even tenor of its labors, playing no favorites, exposing frauds wherever found, and awaiting not the stamp of approval, of praise, or of gratitude from any one. This "clearing house" is the medium through which physicians may learn the unvarnished, straightforward truths about proprietary products. A plea of ignorance of proprietary articles used does not excuse the physician, since it is his duty to follow the course of instruction offered by the Council and to appeal to this clearing house for information (Southern Medical Journal, Sept. 1919, p. 581).

PROGRESS IN MEDICINE AND SURGERY

VESICAL DIVERTICULUM: A clinical Analysis of 21 Cases, by Frank Hinman, (Surgery, Gynecology and Obstetrics, Volume XXIX, No. 2) The author states that in 21 cases of diverticulum in his practice there were two women in the series which is unusual. The ages varied from 37 to 77 with an average of 56 years. There were only three cases under 50.

It has no distinctive symptomology. The importance of the cystogram is universally recognized, but no previous writer has emphasized the importance of making contrast cystograms. The following technique is used: After the bladder has been filled by the gravity method and a plain cystogram taken, the injection solution is drained off and the bladder immediately refilled with air by injection with a double cautery bulb through the urethral catheter. The second X-ray plate, the contrast cystogram, is now taken. The air-filled bladder stands out in

marked contrast to the pouches which have not had time nor opportunity to empty themselves of the X-ray solution. In several cases pouches that were indefinite or not shown at all in the simple cystogram were beautifully demonstrated by the contrast method, and in a few cases a supposed diverticulum with the plain cystogram was disproved by the contrast cystogram. Furthermore, the contrast method will usually give a fairly accurate record of the number and relative size of pouches. It is the exception for the diverticulum not to remain filled after bladder drainage, nevertheless, failure to get a contrast picture is not proof of the absence of a diverticulum.

The author continues. In 17 operations in which the number and relative position of the diverticula were determined by direct examination, a single large diverticulum was present in 11 cases, two large diverticula in 44 cases, and three and four large diverticula each in 1 case. In every case of single sacculation the orifice was located in the neighborhood of an ureteral orifice. In the cases with two diverticula there was usually one near each ureteral meatus. The base showed a diverticulum only when the neighborhood of the ureteral orifices had diverticula and in these instances the diverticulum at the base was always the smallest. In not one case of the 17 operations was the region of one or the other ureteral orifice uninvolved.

The base and posterior walls of the bladder were markedly trabeculated in every case. Large cellules easily admitting the tip of the gloved index finger were located in the neighborhood of the opposite ureter in 9 of the 11 cases of single diverticulum, and in the base of the bladder in 3 of 5 instances of multiple diverticula. In no instance was the mouth of the diverticulum or the cellule found on the high lateral or anterior walls of the bladder. The ureter was shown by the cystogram to be markedly dilated on the right in three cases, and on the left in two; both ureters were dilated in one case.

He says, "A contracture of the vesical neck was found in association in 13 cases and received surgical treatment in 8. A small fibrous or ring prostatic hypertrophy was removed suprapubically in three cases and perineally once. A large glandular prostatic hypertrophy complicated two cases. The diverticula in all of these six cases associated with prostatic enlargement were relatively small and were untreated surgically in three cases, in the two large glandular and in one fibrous hypertrophy. In the two cases in women, which have not come to operation, no definite obstruction to urination other than that attributable to the diverticula was found."

An analysis of symptoms disqualifies vesical diverticulum as a distinct clinical entity. The onset, course, and termination duplicate the clinical picture of prostatism. With respect to urination the onset symptom was: difficulty in 14, frequency in 7, urgency in 4, hesitancy once and simple difficult urination twice. Complete retention occurred at the onset in 3 cases, two of which had contractures of the neck, and the other a small fibrous hypertrophy. Diminution in the urinary force, pyuria, pain in the lumbar region and pain in the right side were the respective initial symptoms in four cases. Cloudy urine was first noticed on an average of 6 years, and was absent altogether in 5 cases, whereas the average duration of symptoms since onset is 16 years. Vesical calculas complicated the anomaly only once.

GEORGE EARL.

THE MODIFIED SLUDER VERSUS THE SNARE OR DISSECTION OPERATION IN TONSILLECTOMY: Harry Rodman, M. D. (New York Medical Journal, June 28, 1919) summarizes systemic disturbances of focal origin as caused by diseased tonsils and concludes that complete enucleation of the tonsil is the only rational method of dealing with such tonsils.

In comparing methods he states the disadvantages of the snare operation namely; injuring pillars, incomplete dissection with only partial removal of the tonsils.

The advantages of the Sluder operation are: a minimum length of time, less danger to pillars and soft parts, shorter time for anaesthesia, less hemorrhage. Its disadvantages are, that it cannot be used under local anaesthesia, it is more painful and dissection in necessary in submerged tonsils and with children.

In concluding the author suggests that every surgeon doing this line of work should be conversant with both methods as at times it is necessary to use either one of them.

Reviewer's Notes: The fact that each year brings forth new instruments and technique relating to tonsil surgery is evidence that the perfected method and technique has not been achieved. From this it would seem that while each method is the best in the hands of the originator there is no need to switch from one method to another, the main object is to master one method and remove the tonsil in toto in as short a time as possible, with the least unnecessary trauma to surrounding tissues.

GEORGE C. DITTMAN.

STUDIES ON CIRRHOSIS OF THE LIVER FOLLOWING INTRA-PORTAL INJECTION OF TOXIC SUBSTANCES: Sukemasa Ogata, (Jour. of Med. Research, Vol. XL., No. 1, 1919) points out that while there are still many unknown factors which influence the cause and development of Laennec's cirrhosis of the liver, it has been recognized by clinicians that the cirrhosis occurs in connection with the absorption of some toxic substances that act injuriously on the liver cells or the connective tissue or on both.

Quite a few authors have attempted the direct injection of toxic substances into the portal vein;

Afanassijew injected alcohol into the portal vein and found cirrhotic changes in the liver, and Ribbert employed alcohol and ether by the same method with increase of interstitial connective tissue following necrosis of the parenchymatous cells. Recently, Kiyona and Murakami reported the changes in the liver caused by injections of various foreign bodies into the portal vein. Diverse changes observed by them depended upon the degree of irritation causing emigration and proliferation of cells in the walls of the blood vessels and in the interlobular connective tissue spaces.

The writer employed alcohol, an extract of cigar tobacco, an emulsion of killed tubercle bacilli, and an emulsion of killed colon bacilli, for the toxic substances. He injected a varying number of doses of these substances into different animals, at intervals of some days. He also injected alcohol and extract of cigar tobacco into the ear vein of other rabbits, for the purpose of comparison.

In the cases in which the writer injected alcohol into the portal and mesenteric veins repeatedly there were seen marked cirrhotic changes in the interlobular spaces, with often newly formed bile ducts, especially marked in one case; and in addition in two of the cases there was also a marked round cell infiltration with increase of connective tissue in the central portions of the lobules. Further, there were also in this series various pronounced degenerative changes of the liver parenchyma. The cirrhosis, however, was not the same as Laennec's cirrhosis of the liver. On the other hand, in the series of cases in which alcohol was injected repeatedly into the ear vein, but slight changes in the interlobular spaces and in the parenchyma of the liver were observed. The difference observed in the two groups of experiments may be due to the difference in concentration of the alcohol as it arrives in the liver.

It is evident that the repeated injections of extract of cigar tobacco into the portal and mesenteric veins may have some toxic effects on the liver. Various changes in the liver parenchyma with remarkable fatty change in two cases in this series have been noted, but only a slight infiltration of round cells with usually no accompanying increases of connective tissue in the interlobular spaces was observed. The case in which extract of cigar tobacco was injected repeatedly into the ear vein showed almost analogous changes, though they were not quite so marked. The difference again may be a difference in concentration. Thus the results of these experiments with nicotine were quite different from those of Laennec's cirrhosis of the liver. It may be said, therefore, that there is no special relation between cirrhosis of the liver and nicotine, as far as these experiments go.

Though the repeated injections of sterilized emulsion of human tubercle bacilli into the portal vein and mesenteric veins of the rabbit, there followed marked changes resembling tuberculous lesions which were followed by an increase of connective tissue, chiefly in the interlobular spaces, together with some toxic effects on the parenchyma of the liver.

The series of cases in which was injected an emulsion of killed colon bacilli repeatedly, into the portal and mesenteric veins, showed marked cell infiltration and some proliferation of connective tissue in the interlobular spaces and some toxic effects on the parenchyma of the liver.

In spite of the marked cirrhotic changes of the liver in some cases, no ascites has been seen in these experiments, and it is probably very difficult to produce ascites under such experiments.

The extent of the changes of the liver is not always proportional to the frequency of the injections of toxic substances into the portal or mesenteric veins in the same rabbit or in different rabbits. In the latter it may depend more or less on the individuality of the rabbit, but the results obtained may be more reasonably explained by the observation that the cells which were once injured by the toxic substances are regenerated and then develop an increased resistance to these substances.

E. T. F. RICHARDS.

THE IMPORTANCE OF EARLY RECOGNITION OF SURGICAL CONDITIONS OF THE BILIARY PASSAGES: Deaver and Reimann (Surg. Gyn. and Ob. Vol. XXIX No. 4.) state that it is a matter of justice to both patient and surgeon that the internist advise early operation in conditions that fail to respond to treatment within a certain reasonable time. There are a few abdominal conditions which carry within themselves more potential mischief than diseases of the gall-bladder and biliary tract. The diagnosis of affections of the gall-bladder is not always easy, even at the operating table, the normal blue appearance of the thin walled gall-bladder may not be changed, but serious infection may be in its contents and only waiting a chance to invade the gall-bladder wall. More than a decade ago, Moynihan called attention to the fact that the earliest symptoms are referred, not to the liver or gall-bladder, but to the stomach. The symptoms are a feeling of epigastric fullness, weight or distress after eating relieved by belching and especially by vomiting. There is a distinct relationship to certain kinds of food. Heartburn and acid eructations also frequently form a part of the history. The patient often notices a catch or pain in the right costal margin on taking a deep breath. These attacks occur with more or less frequency, increase in severity, and the pain usually radiates to the back, the right shoulder or the right arm. Vomiting of bile is common. Jaundice is generally not present during the attack, but may or may not appear two or three days later. A slight icterus at this time usually indicates that a small stone has successfully passed through the cystic duct and caused only a transitory stasis of bile as it traversed the papilla of Vater. It may, however, also indicate that the inflammatory process has extended into the common or hepatic ducts and that the obstruction is due to swelling of these passages. Operation is especially indicated in this class of cases. Sooner or later a stone will fail to pass, will lodge in the common duct, and lead to acute or chronic obstructions of that canal. The serious com-

plications that may arise from the above process, can only be forstalled by early treatment of the cholecystic disease. The operative mortality rises directly with the gravity of the superadded conditions. In acute cholecystitis, the figure ranges from 2 per cent to 4 per cent, when complicated with common duct obstructions, it rises to 5 per cent. With pancreatic involvement it reaches 9 per cent. Cholecystitis is the most common cause of pancreatic lymphangitis. This is the first degree of chronic pancreatitis. Acute pancreatitis is also frequently due to this infection. Pathologically in both calculus and non-calculus chronic cholecystitis, the writers found that in an overwhelming majority of cases, all the coats of the gall-bladder are involved. In the mucosa, there is congestion, swelling, degeneration and increase in the amount of mucus. Lipoid changes occur in which lipoids and cholesterin are deposited in the mucosa and the submucosa. This presents the so-called strawberry Gall-Bladder. This is not of significance as the same condition may occur in other Gall-Bladders and chance may prevent deposition in this particular way.

The interstitial changes, involving submucosa, muscularis and peritoneum are more important than changes in the mucosa. They show how infection spreads from the interior of the gall-bladder to the peritoneum. In long standing cases the gall-bladder is often atrophic, in others it may be distended and filled with thick mucus, sometimes bile stained, and sometimes when the normal function of the organ is lost, no trace of bile is present. Gall stones were present in 70 per cent of the writer's cases.

Medical treatment of the disorder, can and often does, effect a certain degree of improvement and relief of symptoms, but it cannot bring about a cure as it cannot reach the site of the trouble.

The importance of early recognition of surgical conditions of the bile passages is obvious. The history, together with the careful physical examinations are the most reliable guides to a diagnosis. Laboratory procedures, and X-Ray findings, when properly interpreted, are valuable adjuncts. When the diagnosis is made the treatment is surgical. The complications and sequelae are too constant and too grave, to allow other than this proceeding.

E. M. JONES.

BOOK REVIEWS

BOOKS RECEIVED FOR REVIEW

The Future of Medicine, Mackenzie. Oxford Medical Press, 1919., $5.00.

Medical Clinics of North America. W. B. Saunders Co., July, 1919.

Thoughts of a Psychiatrist of the War and After. Hoeber, 1919. $1.75.

Surgical Clinics of Chicago. W. B. Saunders Co., Aug. 1919.

Treatment of Gout. Berkart. Oxford Medical Press. (Paper) 1919. $ .75.

Experimental Pharmacology. McGuigan. Lea & Febiger. $2.75.

Manual of Hygiene and Sanitation. Egbert, Lea & Febiger. $3.00.

Hygiene and Sanitation for Nurses. Price. $1.75.

THE SURGICAL CLINICS OF CHICAGO, February 1919, Vol 3, No. 1. W. B. Saunders Company, Philadelphia.

As usual with the numbers of this valuable publication, it contains much information. Particular attention might be directed to the lecture on the technic in blood tranfusion, by Dr. Victor D. Lespinasse and three cases of plastic repair of facial defects by Dr. Carl Beck, besides numerous reports of more or less rare cases with the careful and sometimes original methods of handling them. The many contributers to this number have made it one of unusual value. L. C. BACON.

SURGICAL ASPECTS OF TYPHOID AND PARATYPHOID FEVERS. By A. E. Webb-Johnson, D. S. O., M. B., Ch. B. (Vict). F. R. C. S. (Eng.) Oxford Medical Publication, 1919. $4.50.

It is a valuable addition to the rather meager and scattered literature on surgical phases of these fevers and is made possible by the author's comprehensive contact with the large number of cases brought together in the recent war. L. C. BACON.

STERILITY IN WOMEN. By Arthur E. Giles, M. D., F. R. C. S., M. R. C. P., Oxford Medical Publications. 1919. $4.00.

This is the author's first edition, a book of 200 pages of reading matter, followed by a chronologically arranged bibliography consisting of over 240 references.

The subject matter is presented in a very logical order, taking up first man's responsibility in the matter and then passing on to the consideration of sterility as it may be caused by functional disorders, disease, injury and malformations.

A most valuable adjunct is the report of case histories, 110 in all, taken from the author's records, illustrating the various factors and conditions that may be productive of sterility.

The chapters of Diagnosis, Prognosis, and Treatment, the last three chapters of the book, form really a brief but exceedingly interesting and valuable treatise on Gynaecology. ALBERT G. SCHULZE.

THE EARLY TREATMENT OF WAR WOUNDS. Colonel H. M. W. Gray. C. B., C. M. G., M. B. Aberdeen, F. R. C. S. Ed. London, Oxford Medical Publications, 1919. $3.75.

A volume of utmost interest especially to the surgeon specializing in Traumatic Surgery. Presenting in a pleasing, concise, style many unique methods for the care and treatment of war wounds, with special emphasis upon the major subject of wound shock, operation of war wounds of the brain and coverings, penetrating wounds of the thorax, injuries to the spinal cord and describes in detail the treatment of gun shot wounds by excision, primary, delayed primary, and secondary sutures.

W. C. RUTHERFORD.

CORRECTION.

The following should be substituted for the last four lines in the second column on page 434:—communities thoroughly aroused to the situation, surely this campaign against venereal diseases can result only in victory. We offer you then the use of our machinery for investigation, for diagnosis, for social service, for education, and we ask you to avail your

The following should be substituted for the last eight lines in the second column, page 435:—to have a medical degree" here is a report from the Federation of State Medical Boards' Bulletin of February, 1918. which says (1) A general knowledge of entire human

The following should be substituted for the last six lines of the second column, page 436:—obtained by any operation and the necessity for glasses would be present just as much after an operation." With an operation then there is also the possibility of its converting a convergent squint into a divergent form.

It might be of interest to refer to the wonderful mechanism of co-ordination and balance brought about by the six delicate ocular muscles

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